

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											

FAULT CATEGORY				
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other	

Work Order ID 92479

92479

Page 2

October-31-12 10:10:09 AM

Item ID: 647.1602 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Doubler Assembly
Start Date: 10/31/12 Start Qty: 4.00 *4* Cust Item ID:
Required Date: 11/09/12 Req'd Qty: 4.00 *4* Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Identify as per dwg & Stock Location	0.00							
140									
Packaging	Memo	0.00							
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING THE P# AND REV***								
150	QC21- Final Inspection - Work Order Release	0.00							
150									
QC	Memo	0.00							
Quality Control									

13/4/24
13-4-24

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Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
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Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Picklist Print

October-31-12 10:10:09 AM

Page 1

Work Order ID: 92479

Parent Item: 647.1602

Parent Item Name: Doubler Assembly

Start Date: 10/31/12

Required Date: 11/09/12

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A 12.10.04 NEW ISSUE DD VERF:JFS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
647.1613 Doubler		Manufactured	No				Each	0.0000		4			
MS21059-3 Nut Plate		Purchased	No				Each	250.0000		16			

92692

4 ~~16~~ 13-4-22

Location	Loc Qty	Loc Code
ST316	250	
123023	50	
123301	200	

16 ~~16~~ 13-4-22

~~CCR264SS3-04~~

RIVET

Purchased No

Each 646.0000

32

Location	Loc Qty	Loc Code
ST327	200	
123352	200	
ST331	446	
17997	446	

32 ~~16~~ 13-4-22

CCR264SS 3-3

123265

See ATTACHED ~~16~~

E"MAIL

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

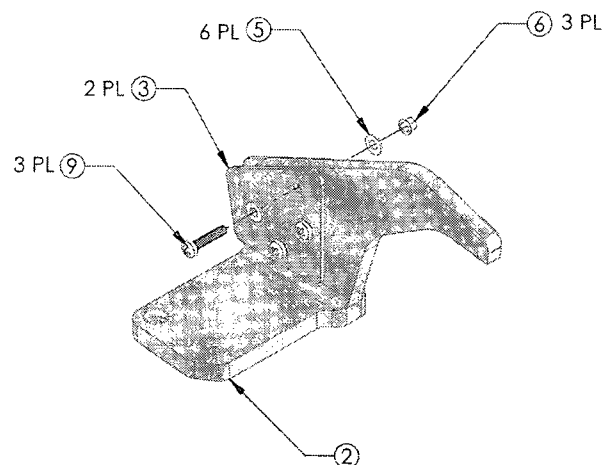
QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
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Equip/Tooling											
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Setup											
Other											
Process											
Supplier											
Training											
Unapproved											

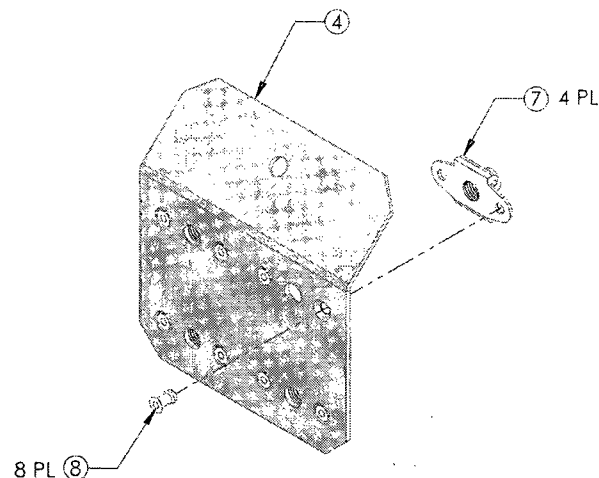
FAULT CATEGORY				
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 AMS-QQ-A-250/12
- 2 MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4
- 3 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK; CARDINAL 4860-50 PRETREATMENT PRIMER PRIME IAW MIL-P-23377 J TYPE I CLASS N
- 4 DEBURR AND BREAK ALL SHARP EDGES
- 5 IDENTIFY IAW MPP-120



647.1601 SHOWN EXPLODED

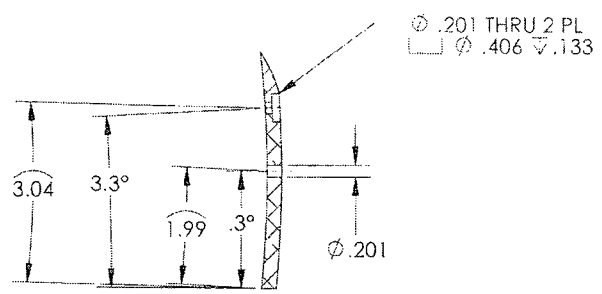
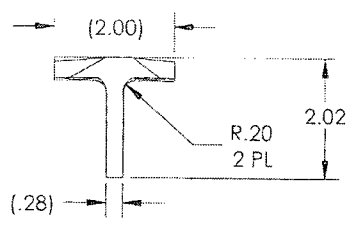


647.1602 SHOWN EXPLODED

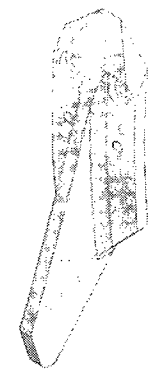
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 92479 MLS
12-10-01

QTY	3	9	601.2989	SCREW	11527039-0010	
8	8	601.2980	NUTPLATE RIVET	010P26435-0-04		
4	7	601.1900	NUTPLATE	44521009-3		
3	6	601.2973	LOCKNUT	44521040-08		
6	5	601.2764	WASHER	44521105F4033P		
1	4	647.1613	DOUBLER		△	△
2	3	647.1612	SPLICE PLATE		△	△
1	2	647.1611	WIPER DEFLECTOR, AFT		△	△
	1	647.1610	WIPER DEFLECTOR, FWD		△	△
X		647.1602	DOUBLER ASSY			
X		647.1601	WIPER DEFLECTOR ASSY, AFT			
11402	11601	FIND #	PART #	DESCRIPTION	MATL	SPEC.
PARTS LIST						
NEXT ASSY (S)			APICAL INDUSTRIES			
647.1300			2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300			
			WIPER DEFLECTOR ASSY			
			REV. N/C			
			647.1600			
			SCALE NONE			
			SHEET 1 OF 6			

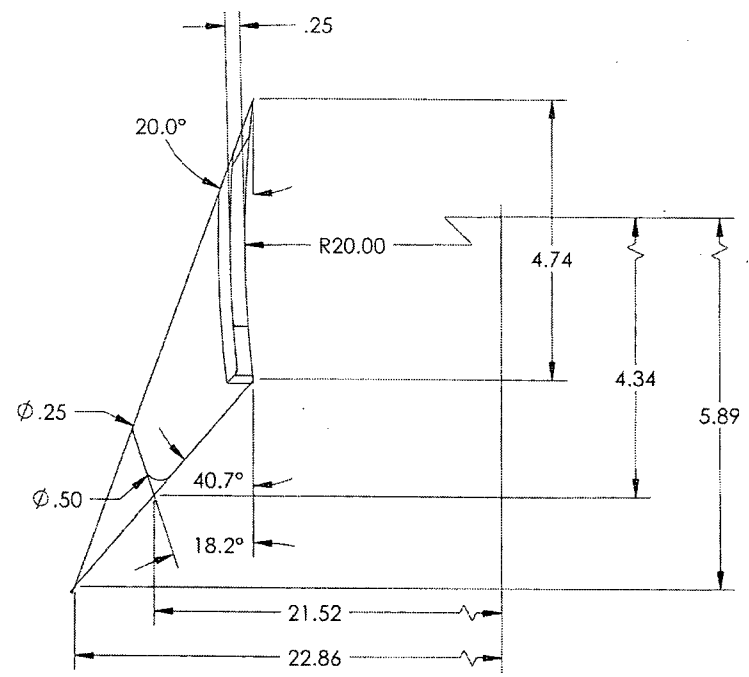
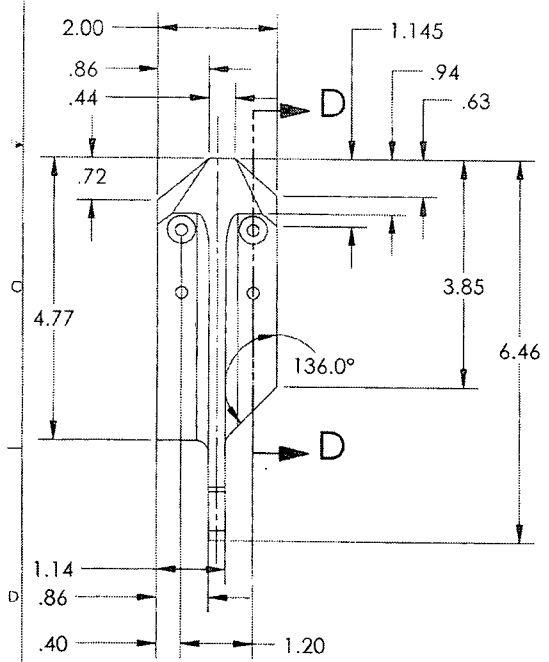
92479



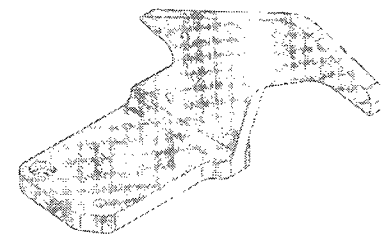
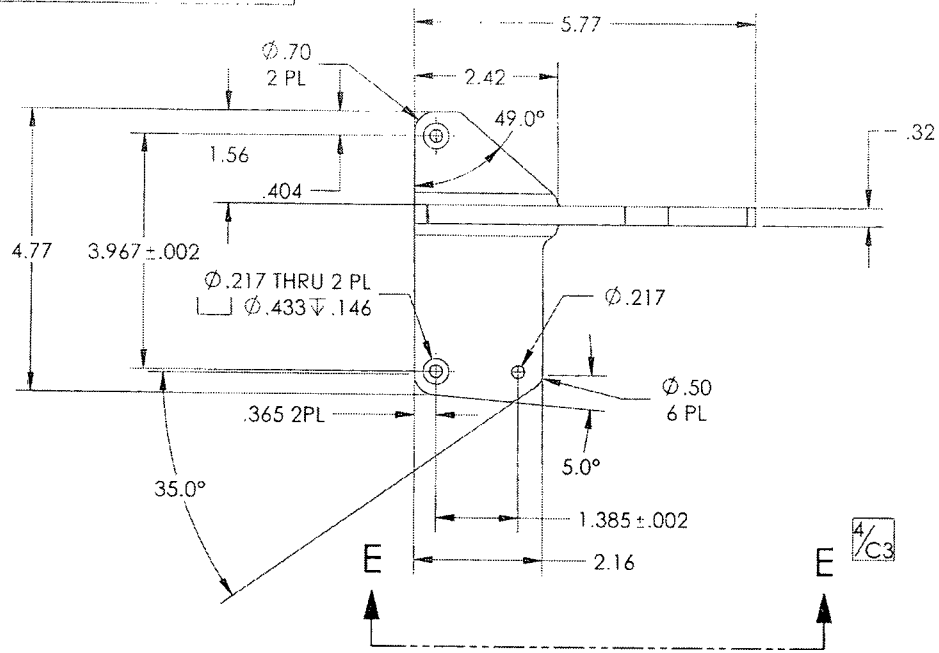
SECTION D-D



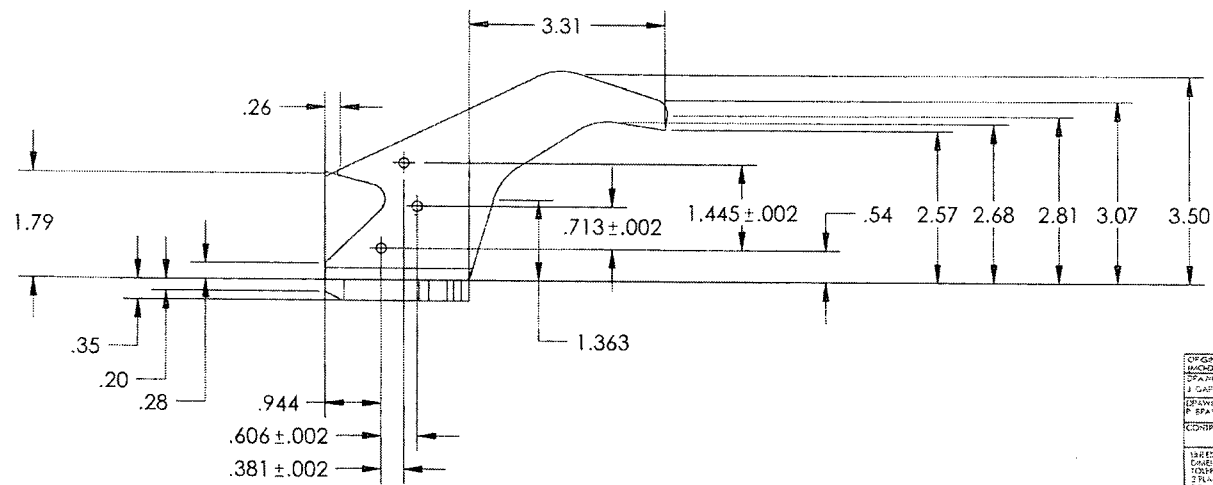
647.1610



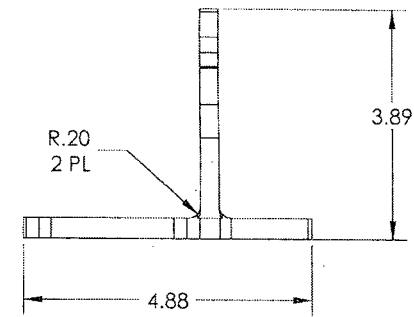
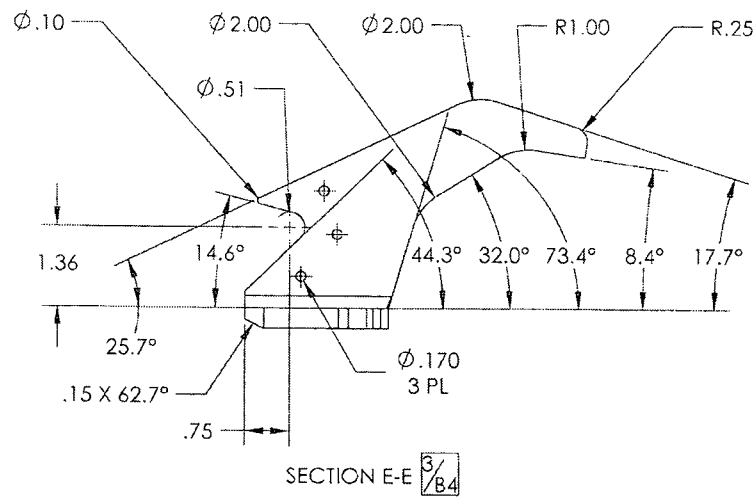
ORIGINAL DATE 06-10-00		APICAL INDUSTRIES	
DESIGNED BY P. BRAVO		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DRAWING APPROVAL P. BRAVO		WIPER DEFLECTOR ASSY	
CONTRACT NO.		SIZE B	REV N/C
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ±.01 HOLE ±.005		DATE CODE 07/01/06	647.1600
SCALE: NONE		SHEET 2 OF 6	



647.1611



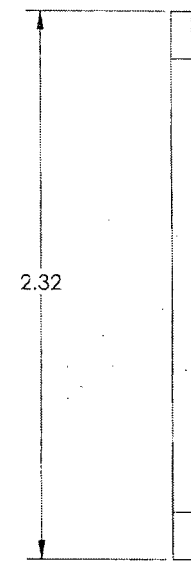
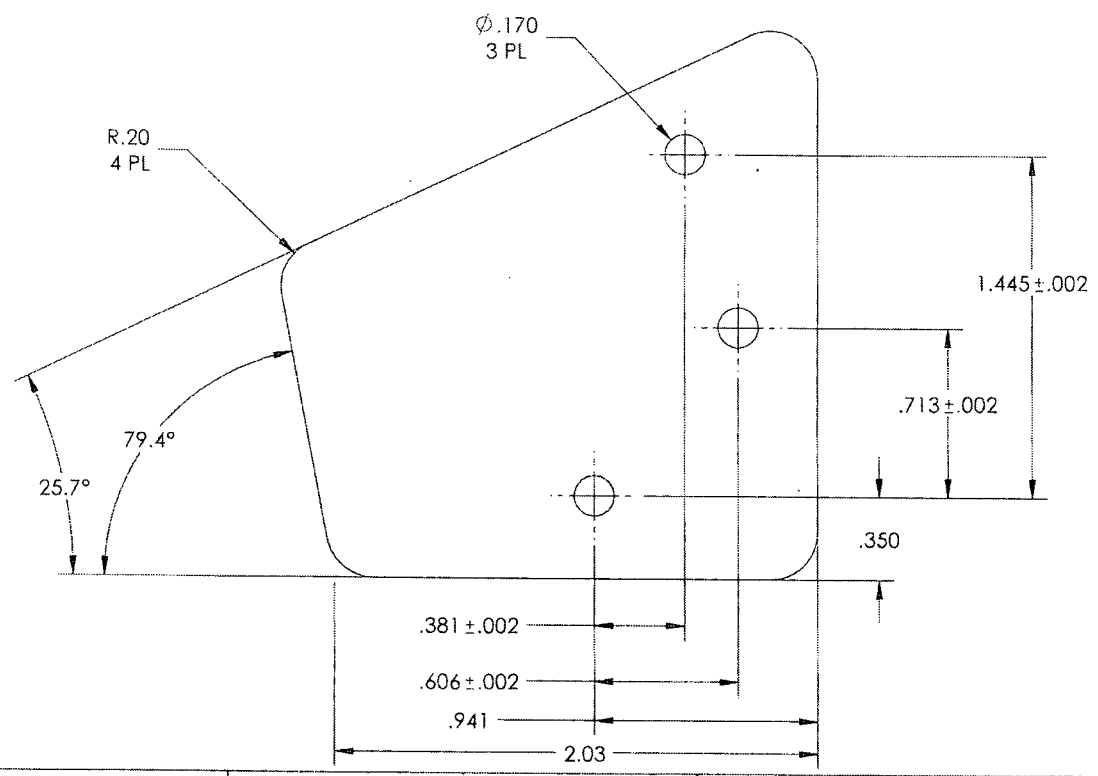
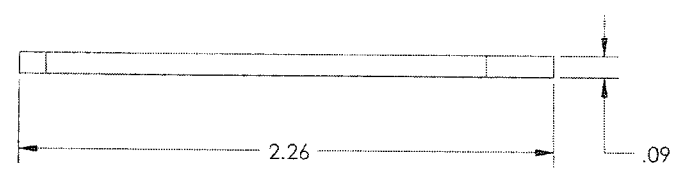
ORIGINAL DATE 11/01/01 DESIGNED BY J. GARDNER DRAWN BY P. SPANO CONTRACT NO.		APICAL INDUSTRIES 2605 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
1. ALL DIMENSIONS SPECIFIED UNLESS OTHERWISE NOTED 2. TOLERANCES ARE: 3. UNLESS OTHERWISE NOTED 4. FINISHES ARE: 5. SURFACES ARE: 6. DIMENSIONS ARE: 7. DIMENSIONS ARE: 8. DIMENSIONS ARE: 9. DIMENSIONS ARE: 10. DIMENSIONS ARE:		WIPER DEFLECTOR ASSY 647.1600 SCALE: NONE SHEET 3 OF 6	



SPECIAL DATE 11-03-2011 06:10:00 DRAWN BY: J. CLAPOR CHECKED BY: P. BRAY DRAWING APPROVAL: P. BRAY CONTRACT NO.:		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMAL: ± .01 3 PLACE DECIMAL: ± .001 ANGLES: ± 5°		WIPER DEFLECTOR ASSY SIZE: 8 07M26 (WGT. LBS) 647.1600 SCALE: NONE	
		REV. N/C SHEET 4 OF 6	

92479

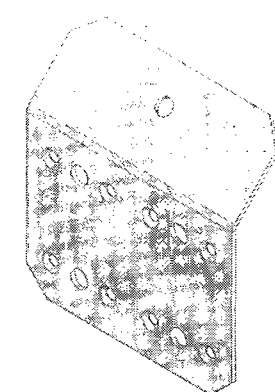
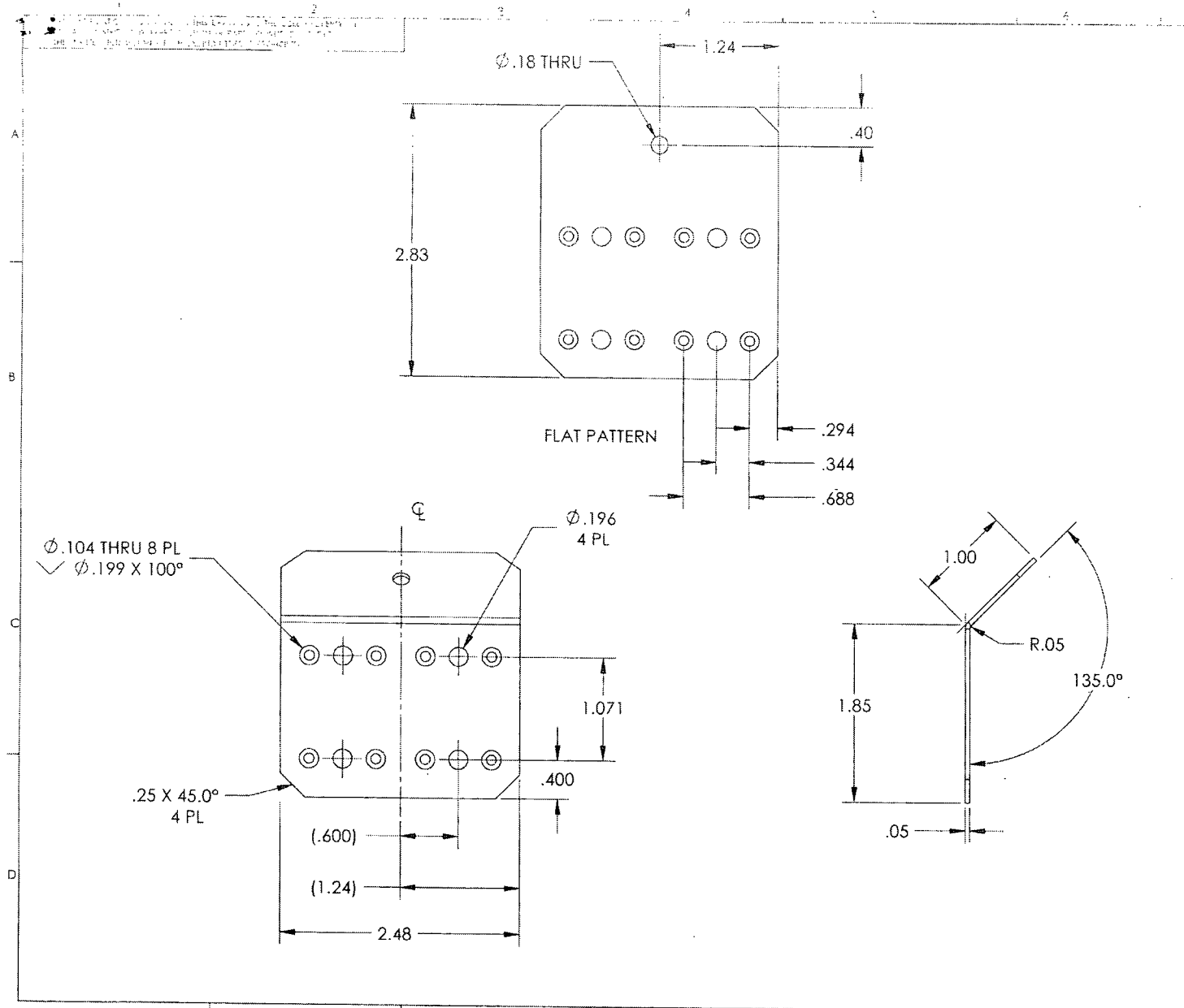
A
B
C
D



647.1612

ORIGINAL DATE 06-15-07		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DWG. BY J. CLARK	CHECKED P. BRAVO		
DESIGNED P. BRAVO	APPROVED P. BRAVO		
CONTRACT NO.		WIPER DEFLECTOR ASSY	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES ± °		SIZE B	CAGE CODE 07M26
		DWG. NO. 647.1600	REV. N/C
		SCALE: NONE	SHEET 5 OF 6

92479



647.1613

ORIGINAL DATE		APICAL INDUSTRIES	
DRAWN BY		2609 TEMPLE HEIGHTS DR.	
CHECKED BY		OCEANSIDE, CA. 92056-3512 (760) 724-5300	
CUST. NO.		WIPER DEFLECTOR ASSY	
CONTRACT NO.		647.1600	
REV		N/C	
DATE		07/16/16	
SCALE		NONE	
SHEET		6 OF 6	

Jean-Luc Menard

From: Alex Quan <aquan@apicalindustries.com>
Sent: April-18-13 11:34 AM
To: Dave Barker; Jean-Luc Menard; Pablo Bravo
Subject: RE: 647.1602 RIVET LENGHT

JL, you are right. They should be -03 rivets.

Alex

From: Dave Barker [<mailto:DBarker@dartaero.com>]
Sent: Thursday, April 18, 2013 8:24 AM
To: Jean-Luc Menard; Pablo Bravo; 'Alex Quan' (aquan@apicalindustries.com)
Subject: FW: 647.1602 RIVET LENGHT

JL – Pablo is out of the office, I've added Alex to the email. He should be able to confirm.

Thanks,

Dave

From: Jean-Luc Menard [<mailto:jmenard@dartaero.com>]
Sent: Thursday, April 18, 2013 5:12 AM
To: Pablo Bravo; 'David Barker'
Cc: Eric Downing
Subject: 647.1602 RIVET LENGHT

Hi Pablo/Dave,

We have started assembling the nutplates on the 647.1602 .

The dwg currently calls for CCR264SS3-04 that is on the right in the picture, on the left is a -04.

Think we should go for the -03.

Let me know what think, if you agree, I will issue a ECR.

Thx ,

JL